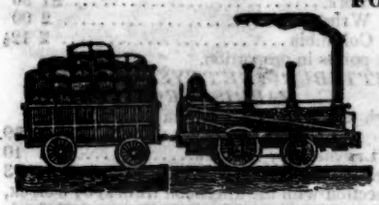
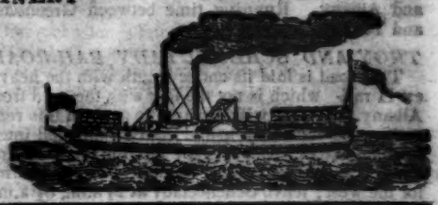
AMERICAN RAILROAD JOURNAL,

AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY AND MINES.





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AMERICAN RAILROAD JOURNAL.

OFFICE AT THE FRANKLIN HOUSE,
105 Chestnut Street,
PHILADELPHIA, PA.

This is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

TERMS.—Five Dollars a year, *in advance.*

RATES OF ADVERTISING.

One page per annum	$125 00
One column "	50 00
One square "	15 00
One page per month	20 00
One column "	8 00
One square "	2 50
One page, single insertion	8 00
One column " "	3 00
One square " "	1 00
Professional notices per annum	5 00

TROY RAILROADS.—IMPORTANT NOTICE.—Troy and Greenbush Railroad, forming a continuous track from Boston to Buffalo and Saratoga Springs.

This road is new, and laid with the heaviest iron H rail. Trains will always be run on this road connecting at Greenbush each way with the trains to and from *Boston* and intermediate places, leaving Greenbush daily at 1½ p.m. and 6 p.m., or on arrival of the trains from Boston; leave Troy at 7½ a. m. and 4½ p.m., or to connect with trains to *Boston*.

Trains also run hourly on this road between Troy and Albany. Running time between Greenbush and Troy, 15 minutes.

TROY AND SCHENECTADY RAILROAD.

This road is laid its entire length with the heaviest H rail which is not the fact with the road from Albany. Trains will always be run on this road connecting each way, to and from Buffalo and intermediate places. Leave Troy for Buffalo at 7½ a.m. and 1 p.m. and 6½ p.m., or to connect with the trains for the west; leave Schenectady at 2½ a.m., 8½ a.m., 1 p.m. and 3½ p.m., or on arrival of the trains from Buffalo and intermediate places.

TROY AND SARATOGA RAILROAD.

THE ONLY DIRECT ROUTE.

No change of passenger, baggage or other cars on this route. Cars leave Troy for Ballston, Saratoga Springs, Lake George and White Hall at 7½ a.m., (arriving one hour in advance of the train from Albany,) and at 3½ p.m. Returning, leave Saratoga at 9 a.m. and 3½ p.m., (reaching Troy in time for the evening boats to New York.) Cars also leave Troy for the Burrough at 3½ p.m. and 7 p.m., connecting with packet boats for the north. This takes passengers from New York and Boston to Montreal in 44 hours.

N.B. Travellers will find the routes through Troy most convenient and economical, and as expeditious as any other. The steamboats to and from New York land within a few steps of the railroad office, and passengers are taken up and landed by the different railroad lines at the doors of principal hotels, thus saving all necessity for, and annoyance from, hack drivers, cabmen, runners, etc.

Aug 3, 1846. 1y 32

BALTIMORE AND OHIO RAILROAD.

MAIN STEM. The Train carrying the Great Western Mail leaves Baltimore every morning at 7½ and Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, connecting daily each way with—the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry—with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh. Time of arrival at both Cumberland and Baltimore 5½ P. M. Fare between those points $7, and 4 cents per mile for less distances. Fare through to Wheeling $11 and time about 36 hours, to Pittsburgh $10, and time about 32 hours. Through tickets from Philadelphia to Wheeling $13, to Pittsburgh $12. Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5½ P. M from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare $1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. s13y1

THE SUBSCRIBER IS PREPARED TO execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warranted equal in every respect in point of quality to the best American or imported Rails. Also on hand and made to order, Bar Iron, Braziers' and Wire Rods, etc., etc.

PETER COOPER 17 Burling Slip.

1y10 New York.

NEW RAILROAD ROUTE FROM BUFFALO to Cincinnati.

Passengers destined for Columbus and Cincinnati, O., Louisville, Ky., St. Louis, Mo., Memphis, Tenn., Vicksburg, Natches, New Orleans, and all intermediate ports, will find a new, and the most expeditious and comfortable Route, by taking Steamboats at Buffalo, landing at Sandusky City, Ohio, distance.....230 miles.

From thence by Cars, over the Mansfield Railroad which is new and just opened [laid with heavy Iron,] to Mansfield, distance..... 56 "

Thence by Stage via Columbus to Xenia over gravel and Macadamized Road, (the best in the state,) in new coaches, distance..... 88 "

Thence, over the Little Miami Railroad, from Xenia to Cincinnati, distance.... 65 "

TIME.

From Buffalo to Sandusky..... 24 hours.
Leave Sandusky 5 a.m. to Columbus.... 14 "
From Columbus to Cincinnati..... 15 "

Or say 30 hours from Sandusky to Cincinnati over this route, including delays.

FARE.

From Buffalo to Sandusky, Cabin.....$6 00
" " " " Steerage..... 3 00
" Sandusky to Columbus..... 4 50
" " *through* to Cincinnati..... 8 00

Passengers should not omit to pay their fare *through* from Sandusky City to Cincinnati and take receipts availing themselves of the benefit of a contract existing between the said Railroad and Stage Co's, securing 121 miles travel by good Railroad and 88 miles by Stage, in crossing from Lake Erie to the Ohio river, in the space of 30 hours.

Passengers destined for St. Louis, or any point below on the Mississippi, will save by taking this route, from 4 to 6 days time and travel, and nearly half the expense, over the Chicago and Peoria route to the above places.

Fare by this route, although the cheapest, will in a short time be reduced, Railroad lengthened, and speed increased.

B. HIGGINSON, *Sup't, etc.*
M. & S. C. R. R. Co.

Sandusky City, Ohio.

NEW YORK & HARLEM RAILROAD CO.—Winter Arrangement.

On and after Monday, November 23, 1846, the cars will run as follows:

Leave 27th street for 42d street, Deaf and Dumb Institute, Yorkville, Harlem Morrianna, and Williams' Bridge, at 7 o'clock a.m. From City Hall for above named places, 2 p.m. [freight train,] 2 30 p.m. 5 p.m. to Morrisiania only.

Leave City Hall for Harlem, Morrisiania, Fordham and Williams' Bridge, at 7 45 a.m., and 10 45 a.m.; 1 15 p.m., 2 p.m. [freight train], 2 30 p.m. and 3 45 p.m.

Leave City Hall for Hunt's Bridge, Bronx, Tuckahoe, Hart's Corners White Plains, Davis' Brook, Unionville and Pleasantville, [Pleasantville 4 miles from Sing Sing,] 7 45 and 10 45 a.m.; 1 15 p.m., 2 p.m. [freight train], and 3 45 p.m.

RETURNING.

Leave Pleasantville, at 8, 10, [freight train], and 11, a.m.; 1 30, and 4, p.m.

Leave White Plains, at 8 12, 10 30, [freight train] and 11 20 a.m.; 1 50, and 4 20, p.m.

Leave Tuckahoe, 8 35, 10 55, [freight train,] and 11 35, a.m.; 2 05, and 4 35, p.m.

Leave Williams' Bridge at 7 45, 8 50 and 11 50 a.m.; 2 30, 4, and 4 50 p.m.

Leave Morrisiania 8 and 9 05 a.m.; 12 05, 2 35, 4 20, 5 05 and 6 p.m.

Leave Yorkville, at 8 12 a.m.; 4 35 and 6 15 p.m.

SUNDAY ARRANGEMENTS.

Leave City Hall for Pleasantville and intermediate places, at 7 45 a.m.; 1 15 and 3 p.m.

Leave Pleasantville for City Hall, at 8 a.m.; 11, and 3 15 p.m.

Leave City Hall for Williams' Bridge and intermediate places, 10 45 a.m.; 2 30 p.m.

Leave Williams' Bridge for City Hall, at 8 50 and 11 50 a.m.; 1, 3 45 and 4 05 p.m. 1y49

BALTIMORE AND SUSQUEHANNA Railroad.—Reduction of Fare. Morning and Afternoon Trains between Baltimore and York.—The Passenger trains run daily, except Sunday, as follows:

Leaves Baltimore at.....9 a.m. and 3½ p.m.
Arrives at.....9 a.m. and 6½ p.m.
Leaves York at.....5 a.m. and 3 p.m.
Arrives at.....12½ p.m. and 8 p.m.
Leaves York for Columbia at..1½ p.m. and 8 a.m.
Leaves Columbia for York at..8 a.m. and 2 p.m.

FARE.

Fare to York.....$1 50
" Wrightsville..... 2 00
" Columbia..... 2 12½

Way points in proportion.

PITTSBURG, GETTYSBURG AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg.....$9
Or via Lancaster by railroad..... 10
Through tickets to Harrisburg or Gettysburg.. 3

In connection with the afternoon train at 3½ o'clock, a horse car is run to Green Spring and Owing's Mill, arriving at the Mills at.....5½ p.m.
Returning, leaves Owing's Mills at.....7 a.m.

D. C. H. BORDLEY, *Sup't.*
31 1y Ticket Office, 63 North st.

LEXINGTON AND OHIO RAILROAD.

Trains leave Lexington for Frankfort daily, at 5 o'clock a.m., and 2 p.m. Trains leave Frankfort for Lexington daily, at 8 o'clock a.m. and 2 p.m. Distance, 28 miles. Fare $1 25.

On Sunday but one train, 5 o'clock a.m. from Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to 15th March) is 6 o'clock a.m. from Lexington, and ma. 9. from Frankfort, other hours as above.

35 1y

SOUTH CAROLINA RAILROAD.—A Passenger Train runs daily from Charleston, on the arrival of the boats from Wilmington, N. C., in connection with trains on the Georgia, and Western and Atlantic Railroads—and by stage lines and steamers connects with the Montgomery and West Point, and the Tuscumbia Railroad in N. Alabama.

Fare through from Charleston to Montgomery daily.....$26 50
Fare through from Charleston to Huntsville, Decatur and Tuscumbia..... 22 00

The South Carolina Railroad Co. engage to receive merchandize consigned to their order, and to forward the same to any point on their road; and to the different stations on the Georgia and Western and Atlantic railroad; and to Montgomery, Ala., by the West Point and Montgomery Railroad.

1y25 JOHN KING, Jr, *Agent.*

CENTRAL RAILROAD—FROM SAVANnah to Macon. Distance 190 miles.

This Road is open for the transportation of Passengers and Freight. Rates of Passage, $8 00. Freight—

On weight goods generally... 50 cts. per hundred.
On measurement goods..... 13 cts. per cubic ft.
On brls. wet (except molasses and oil).....$1 50 per barrel.
On brls. dry (except lime)... 80 cts. per barrel.
On iron in pigs or bars, castings for mills, and unboxed machinery..... 40 cts. per hundred.
On hhds. and pipes of liquor, not over 120 gallons.....$5 00 per hhd.
On molasses and oil.....$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded free of commission. THOMAS PURSE,

y40 Gen'l. Sup't. Transportation.

MANUFACTURE OF PATENT WIRE Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by

JOHN A. ROEBLING, *Civil Engineer*, Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railrord, has now run 4 seasons, and is still in good condition. 2y19 1y

CENTRAL AND MACON AND WESTern Railroads, Ga.—These Roads with the Western and Atlantic Railroad of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

	Miles.
Savannah to Macon—Central Railroad	190
Macon to Atlanta—Macon and Western	101
Atlanta to Oothcaloga—Western and Atlaniic	80

Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

	To Atlanta.	To Oothcaloga.
On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings	$0 50	$0 75
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones	0 50	0 62½
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot	0 20	0 26
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot	0 20 pr. 100lbs.	35
Crockery, per cubic foot	0 15 " "	35
Molasses and Oil, per hhd., (smaller casks in proportion).	9 00	12 50
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each	1 25	1 50
Ploughs, (small,) and Wheelbarrows	0 80	1 05
Salt, per Liverpool Sack	0 70	0 95

Passage—Savannah to Atlanta, $10; Children, under 12 years of age, half price, Savannah to Macon, $7.

☞ Goods consigned to the subscriber will be forwarded free of Commissions.

☞ Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, *Forwarding Agent, C. R. R.*
Savannah, Aug. 15th, 1846. 1y34

GREAT SOUTHERN MAIL LINE! VIA Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans. The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4½ P.M., Philadelphia at 10 P.M., and Baltimore at 6½ A.M., proceed without delay at any point, by this line, reaching Richmond in *eleven*, Petersburg in *thirteen and a half hours*, and Charleston, S. C., in *two days* from Baltimore.

Fare from Baltimore to Charleston.....$21 00
" " " Richmond..... 6 60

For Tickets, or further information, apply at the *Southern Ticket Office*, adjoining the *Washington Railroad Office*, Pratt street, Baltimore, to
1y14 STOCTON & FALLS, Agents.

RAILROAD SCALES.—THE ATTENtion of Railroad Companies is particularly requested to Ellicotts' Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.
Factory, 9th street, near Coates, cor. Melon st.
Office, No. 3 North 5th street,
1y25 Philadelphia, Pa.

GEORGIA RAILROAD, FROM AUGUSTA to ATLANTA—171 MILES. AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO OOTHCALOGA, 80 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 388 miles in length, from Charleston to Oothcaloga on the Oostenaula River, in Cass Co., Georgia.

RATES OF FREIGHT.		Between Augusta and Oothcaloga. 250 miles.	Between Charleston and Oothcaloga. 386 miles.
1st class.	Boxes of Hats, Bonnets, and Furnature, per cubic foot	$0 16	$0 25
2d class.	Boxes and Bales of Dry Goods, Sadlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	0 90	1 40
3d class.	Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Bar and Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 55	0 75
4th class.	Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Feathers, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc	0 37½	0 62½
	Cotton, per 100 lbs	0 45	0 65
	Molasses, per hogshead.	8 50	13 50
	" " barrel	2 00	3 25
	Salt per bushel	0 17	
	Salt per Liverpool sack		95
	Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows	0 75	1 37

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight may be paid at Augusta, Atlanta, or Oothcaloga.

J. EDGAR THOMSON,
Ch. Eng. and Gen. Agent.
Augusta, Sept. 2d, 1846. •44 1y

THE WESTERN AND ATLANTIC Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tuscumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,
Chief Engineer.
Atlanta, Georgia, April 16th, 1846. 1y1

TO RAILROAD COMPANIES AND MANufacturers of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE,
a45 E. cor. 12th and Market sts., Philad., Pa.

LITTLE MIAMI RAILROAD.—OPEN TO SPRINGFIELD—Distance 84 miles— connecting at Xinia and Springfield with Messrs. Neil, Moore, & Co's. daily daylight lines of stages going east and north, to Columbus, Zanesville, Wheeling, Cleveland, and Sandusky City..via Urbana, Bellefontaine, Kenton, and the Mad river and lake Erie railroad, or Columdus, Delaware, and the Mansfield and Sundusky City railroad—forming, by these connections, the cheapest and most expeditious route to Buffalo, Niagara Falls, Rochester, Albany, New York, and Boston.

On and after Thursday, August 13, 1846, until further notice, a Passenger train will run as fllows:

Leave Cincinnati daily at 9 A. M., for Milford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freeport, Waynesville, Spring Valley, Xenia, Old Town, Yellow Springs, and Springfield.

Returning, will leave Springfield at 4 hours 35 minutes A. M. A line of Hacks runs in connection with the Cars, between Deerfield and Lebanon.

FARE—From Cincinnati to Lebanon....$1 00
" " " Xenia..... 1 50
" " " Springfield.. 2 00
" " " Columbus... 4 00
" " " Sundusky city 8 00

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company, on East Front street.

Further information and through tickets for the Stage lines, may be procured at P. Campbell, Agent on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at of a passage for every $500 in value over that amount.

The 1½ P. M. train from Cincinnati, and the 2 40 P. M. train from Xenia, will be discontinued on and after Monday, the 10th instant.

A freight train will run daily.
47tf W. H. CLEMENT, *Sup't.*

PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1847.

Winter Arrangement.

Philadelphia for Baltimore...8 a.m. and 4 p.m.
Baltimore for Philadelphia...9 a.m. and 8 p.m.

Connecting in Baltimore with Mail Lines south and west, as per notice of the Baltimore and Ohio Railroad—and with Mail Lines north from Philadelphia, both morning and afternoon.

Sundays, the *Morning* Lines do not run in either direction.

Accommodation train from Wilmington to Philadelphia, leaves Wilmington at 8 a.m., and returns at 2 p.m. J. R. TRIMBLE,
2tf *Engineer and General Superintendent.*

LAWRENCE'S ROSENDALE HYDRAulic Cement. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Flooms and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight papered barrels, by JOHN W. LAWRENCE,
142 Front street, New York.
☞ Orders for the above will be received and promptly attended to at this office. 32 1y

SPRING STEEL FOR LOCOMOTIVES, Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1¼ to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, *Agent*,
1y Albany Iron and Nail Works,

VALUABLE PROPERTY ON THE MILL Dam For Sale. A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury fronting on and east of Parker street, containing 68,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x32 fe. with lathes, work benches.

Work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, furnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45½ feet two stories high, with a shed part 45½x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street, 54x25 feet.

Also—A lot of land on the canal, west side o Parker st., containing 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide.

For terms, apply to HENRY ANDREWS, 48 State st., or to CURTIS, LEAVENS & CO., 106 State st., Boston, or to A. & G. RALSTON & Co., Philadelphia. ja4

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to ½ in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER Flues.

Manufactured and for sale by
MORRIS, TASKER & MORRIS.
Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

PATENT INDESTRUCTIBLE WATER Pipes. The subscribers continue to manufacture the above PIPES, of all the sizes and strength required for City or Country use, and would invite individuals or companies to examine its merits.—This pipe, unlike cast iron and lead, imparts neither color, oxide or taste, being formed of strongly riveted sheet iron, and evenly lined on the inside with hydraulic cement. While in the process of laying, it has a thick covering externally of the same—thus forming nature's own conduit of stone. The iron being thoroughly enclosed on both sides with cement, precludes the possibility of rust or decay, and renders the pipe truly *indestructible*. The prices are less than those of iron or lead. We also manufacture Basons and D. Traps, for Water Closets, on a new principle, which we wish the public to examine at 112 Fulton street, New York.

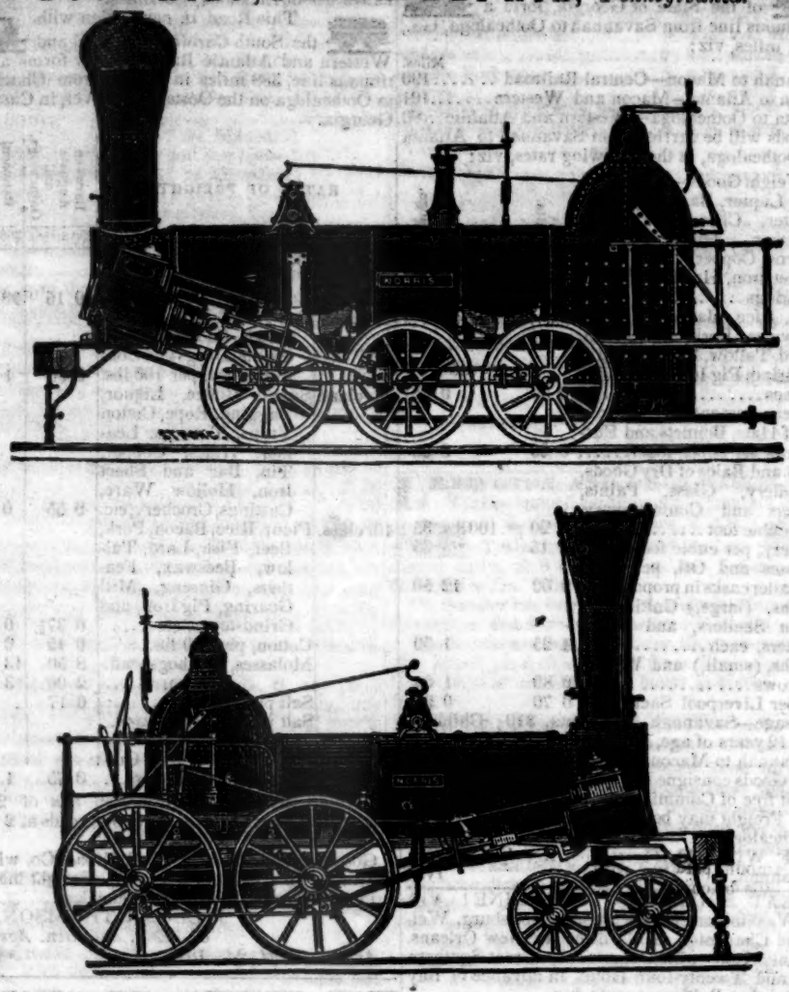
9tf J. BALL & CO.

TO LOCOMOTIVE AND MARINE ENgine Boiler Builders. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufactured and for sale by

MORRIS TASKER & MORRIS,
Warehouse S. E. corner 3d and Walnut Sts., Philadelphia. 1tf

NORRIS' LOCOMOTIVE WORKS.

BUSH HILL, PHILADELPHIA, Pennsylvania.



MANUFACTURE their Patent 6 Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz:

Class	1,	15	inches	Diameter of	Cylinder,	× 20	inches	Stroke.
"	2,	14	"	"	"	× 24	"	"
"	3,	14½	"	"	"	× 20	"	"
"	4,	12½	"	"	"	× 20	"	"
"	5,	11½	"	"	"	× 20	"	"
"	6,	10½	"	"	"	× 18	"	"

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion.

Castings of all kinds made to order: and they call attention to their Chilled Wheels, for the Trucks of Locomotives, Tenders and Cars.

NORRIS, BROTHERS.

THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention. ANDREW C. GRAY,

a45 President of the Newcastle Manuf. Co.

RAILROAD IRON AND LOCOMOTIVE Tyres imported to order and constantly on hand by A. & G. RALSTON

Mar. 20tf 4 South Front St., Philadelphia.

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25,000 to 30,000 made weekly. 35

Western Railroad.

Twelfth Annual Report of the Directors of the Western Railroad Corporation, to the Stockholders, January, 1847.

The Directors of the Western Railroad Corporation, in submitting their Twelfth Annual Report, would remark, that in order to be prepared to make the dividends payable on or about the 1st day of January and July in each year, and for the purpose of having more time to prepare the report for the Legislature, and likewise to have the financial year end at the same time with that of the Boston and Worcester Railroad Corporation, have ordered the accounts to be made up to November 30th of each year, instead of December 31st as formerly. In consequence of this change, the report will embrace only the business for eleven months, from January 1st to November 30th, 1846.

TRANSPORTATION DEPARTMENT.

The balance of the transportation account was reported at the close of the year ending December 31, 1845 to be $76,065 73
While at the same time it apppeared by the Treasurer's books 52,099 18

The difference would be a debit to old balance, and amount to $23,966 55
In examining the Station Agent's acc'ts and comparing them with the general transportation acc't, they were found to vary, where vouchers, explaining the variation, could be furnished, to the amount of 3,830 91
And where no vouchers could be furnished, the difference having accrued in the early manag'm't of the road, to 5,589 24
The bad debts which accrued mostly in the early operations of the road which had not been charged off until now, were 6,115 70
The amount paid in 1846, in settlement of bills belonging to previous years, was 4,294 54

Total amount chargeable to old reported balance $43,796 94
Which will make the balance December 31, 1845, as corrected $32,268 79
To which may be added the am'nt since credited to this account from shares of the capital stock as provided for by the act of the legislature of March 25, '45 114,736 68

147,005 47

From which may be deducted the dividend of 2 per cent. declared, Jan. 1846, and payable the following March... 60,000 00

Balance of transportation account at the commencement of the present year's business $87,005 47
The income of the road for 11 months to November 30, 1846, has been—
Passengers $389,861 42
Freight 459,365 18
Mails, rents, express, etc. 29,191 29—$878,417 87*
Expenses for the same period have been as follows—for
Road repairs $80,293 25
Engine repairs 48,909 25
Car repairs 40,544 06
Buildings, etc 16,195 02
Transportation expenses. 202,524 45
General expenses .... 24,213 77—$412,679 80

$465,738 09

From which deduct interest paid on loan 244,731 57
Two dividends of 3 per ct. each on 34,000 shares.. 204,000 00—$448,731 57

Surplus in 11 months, ending Nov. 30, 1846 .... $17,006 52
To which add surplus of previous years 87,005 47

Total surplus, Nov. 30, 1846 .... $104,011 99

During the eleven months the trains have been run with great regularity, considering the number of trains and the amount of business which has been done upon a single track, and without any serious accident to persons or property.

The increase of business for the eleven months, as compared with the corresponding period in 1845, has been 20½ per cent. on freight, and 13·7 per cent. on passengers—making an average gain of 17¼ per cent., besides the amount which has been overcome by the reduction of passenger fares.

It has been the aim of the Directors to keep the road and equipments in as good condition, in all its parts, to the close of the year, as it was at the commencement.

During the eleven months the road bed has been somewhat improved. Thirty five thousand new sleepers have been put down during the season, which is the full average number required.

In the amount of expenses for road repairs for the eleven months, $15,000 has been charged and credited to a deterioration account, to be in reserve against the time when the old rails will have to give place for new ones.

The engines are in about as good condition as they were at the commencement of the year; but a new one, which cost $7,700, has been added to the stock and charged to the expenses of engine repairs, which is much more than the depreciation of others within the eleven months.

Two long passenger cars and fifteen eight wheel freight cars, which cost $15,250, have been added and charged to expenses for cars, which, it is believed, will more than make good any depreciation of the remainder within the eleven months. In fact, it might be safely said, that most of the freight cars are in as good condition as at the commencement of the year; but, as old cars are more likely to get out of order than new ones, and consequently the time consumed in making repairs upon them, deprives the road of their use, it should be made up by additional numbers. The same remark is applicable to engines, although they will never wear out, inasmuch as the old parts are constantly being changed for new, yet while these repairs are going on, the road is deprived of their use, which should be made up by an increase of numbers, and charged to expenses, so that the road will have the constant use of as many in perfect order, as the number charged to capital stock.

A new bridge for a double track, which cost $5,835 70, has been built across the Westfield river, at Chester village, about 300 feet long, of the best materials, and of the most approved construction, which has been charged to the expenses for road repairs, and more than makes good any deterioration of the remainder of the bridges for the year.

The following tables will give a comparative statement of the business of the road since the commencement.

The number of through and way passengers, and the number of barrels of flour transported, during the last five years. The number of miles run during eleven months of 1846. Also a schedule of engines and cars belonging to the corporation.

Comparative Statement of the Business of the Road.

	Passengers.	Merchand'z	Mails, etc.	Total.	Expenses.	Balance of Receipts.	Miles Run
1839 3 m.	$13,472 94	$4,136 21		$17,609 15	$14,380 64	$3,228 51	
1840	70,820 79	38,359 78	$3,166 82	112,347 39	62,071 72	50,275 67	94,404
1841	113,841 85	64,467 14	4,000 00	182,308 99	132,501 45	49,807 54	160,106
1842*	266,446 83	226,674 61	19,566 84	512,688 28	266,619 30	246,068 98	397,295
1843	275,139 64	275,696 19	23,046 68	573,882 51	303,973 06	269,909 45	441,608½
1844	358,694 00	371,131 84	23,926 88	753,752 72	314,074 20	439,678 52	499,968
1845	366,753 02	420,717 30	26,009 83	813,480 15	370,621 25	442,858 90	530,201
1846 11 m.	389,861 42	459,365 18	29,191 29	878,417 89	412,679 80	465,738 09	573,956

* First year of opening through to Albany.

Number of Way and Through Passengers.

	Through passengers. 1st Class.	Through passengers. 2d Class.	Total.	Way passengers. 1st Class.	Way passengers. 2d Class.	Total.	Total 1st Class.	Total 2d Class.	Grand Tot.
1842	15,890	2,680½	18,570½	148,500	23,366	171,866	164,390	26,046½	190,436½
1843	19,967	6,608	26,575	140,425	33,945½	174,370½	160,412	40,553½	200,965½
1844	17,016½	7,314	24,330½	140,868½	55,058½	195,927	157,885	62,372½	220,257½
1845	13,401½	5,791	19,192½	144,723	59,717½	204,440½	158,124½	65,508½	223,633
1846 11 m.	21,033	8,799½	29,832½	165,196	70,635½	235,831½	186,229	79,435	265,664
	87,328	31,193	118,521	739,712½	242,723	982,435½	827,040½	273,916	1,100,956½

Number of Barrels of Flour transported from Albany and Troy.

	To Boston.	To other Stations.	Total No.
1842	85,986	86,124	172,110
1843	123,366	120,873	244,239
1844	154,413	142,990	297,403
1845	181,796½	146,386½	328,183
1846 11 m	209,634	151,711	†361,345

Number of Tons transported in Eleven months of 1846.

Through from Boston to Albany, westw'd	8,358
All other tonnage	40,251
Total going west	48,609
Through from Albany to Boston, eastw'd	36,403
All other tonnage	81,382
Total going east	117,785
Total number of tons moved	166,394
Equivalent No. of tons carried 1 mile	15,748,223
Equivalent number of tons carried over the whole road	100,950

† In December, 1846, the number of barrels transported to Boston, was 23,286
No. of barrels transported to other stations.. 12,208

Total number of barrels in December 35,494

Making the whole number of barrels transported in 1846 396,839

* The amount of earnings for December, 1846, have been $76,000, which, added to the receipts for eleven months, will make the gross receipts of 1846, $954,417 89, and an increase over the year 1845, of $140,937 89.

Number of Miles run by Locomotives in Eleven Months of 1846.

For passenger trains	215,369
For freight trains	313,259
For gravel trains, etc	45,328
Total number of miles	573,956

Schedule of Engines and Cars belonging to Western Railroad Corporation, November 30, 1846.

Engines.		Built by
12	10 ton passenger,	Locks & Canals Co., Lowell.
5	15 ton passenger,	Hinkley & Drury, Boston.
1	15 ton passenger,	W. Norris & Co., Philada.
7	23 ton freight	R. Winans, Baltimore.
3	20 ton freight	Locks & Canals Co., Lowell.
6	20 ton freight	Hinkley & Drury, Boston.
1	16 ton freight	Hinkley & Drury, Boston.
1	20 ton freight	W. Norris & Co., Philada.
5	20 ton freight	Baldwin & Whitney, "
2	10 ton freight	R. Winans, Baltimore.
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Cars.	
19	8 wheeled passenger, 1st class.
7	4 wheeled passenger, 1st class.
4	8 wheeled passenger, 2d class.
4	8 wheeled passenger, baggage.
2	4 wheeled passenger, baggage.
4	8 wheeled passenger, crate.
2	4 wheeled passsenger, crate.
13	baggage crates.
448	8 wheeled covered freight..
65	8 wheeled platform.
100	4 wheeled covered.
70	gravel and dirt.
26	hand.

CONSTRUCTION.

Since the last annual report, the capital has been increased by creating 4000 shares, which have been disposed of agreeably to the Act of March 25, 1845.

The total means provided for construction and equipment of road have been

34,000 shares at $100 each		$3,400,000 00
£135,000 sterl. bonds, payable with interest at 5 pr ct.	April 1, 1868.	
337,500	" Oct. 1, 1868.	
90,000	" Oct. 1, 1869.	
180,000	" April 1, 1870.	
157,400	" April 1, 1871.	
£899,900 average due July 5, 1869		$3,999,555 56
Albany city bonds payable with interest at 6. per ct. July 1, 1866.	$250,000	
" July 1, 1870.	300,000	
" July 1, 1871.	200,000	
" July 1, 1876.	250,000	$1,000,000 00
		$8,399,555 56
Am't paid to Albany sinking fund	$100,000 00	
Am't paid income for money previously paid into the sinking fund, as per act of March 25, '45	114,736 68	
Am't accrued to the sinking fund Nov. 30, 1846, but not due until January 1, 1847	45,833 34	
Total am't paid for construction and equipment of road (see table A)	8,185,788 42	$8,446,358 44
Excess of funds expended over am't provided		$46,802 88

It will be perceived by reference to the annexed table marked A, that $296,079 11 has been expended for construction and equipment of the Western and Albany and West Stockbridge railroads during the eleven months ending November 30, 1846, and that most of it has been expended for engines, cars, land, and additional track.

The attention of the Directors was early called to the importance of providing more efficient means for doing the business of the road; at which time it was decided to order six engines, in addition to the four then ordered, and 100 long eight wheeled freight cars, in addition to 90 previously contracted for, all of which have since been put upon the road, and most of the cost charged to construction.

TABLE A.

Table showing the Cost of the Western and Albany and West Stockbridge Railroads to November 30, 1846.

Heads of Expenditures.	Amount paid to Dec. 31 1845. Western Railroad.	Amount paid to Dec. 31 1845. A. & W. S. Railroad.	Amount paid in 1846. Western Railroad.	Amount paid in 1846. A. & W. S. R. R.	Total Amount paid. Western Railroad.	Total Amount paid. A. & W. S. Railroad.	Total cost of both Roads.
Graduation and masonry	3,146,494 36	868,474 30	7,545 50		3,154,039 86	869,635 96	4,207,412 05
Bridging	163,736 23			1,161 66	163,736 23		1,347,760 11
Superstructure, including iron	1,031,686 08	293,901 82	22,347 38	524 83	1,054,033 46	293,726 65	425,505 93
Station buildings and fixtures	232,179 14	170,610 80	18,153 87	4,563 12	250,332 01	175,173 92	481,029 15
Land, land damage, and fencing	234,454 97	203,476 92	42,551 19	546 07	277,006 16	204,023 99	418,978 14
Locomotives	347,470 72		71,507 42		418,978 14		55,066 49
Passenger and baggage cars	50,418 02		4,648 47		55,066 49		370,548 01
Merchandize cars	248,018 41		122,529 60		370,548 01		879,488 54
Engineering and other expenses	665,850 61	213,637 93			665,850 61	213,637 93	8,185,788 42
	6,120,307 54	1,769,401 77	299,283 43	6,795 68	6,409,590 97	1,776,197 45	

It was also deemed essential that the turnout tracks should be lengthened, where trains are liable to pass each other; and that a third track should be put down in front of the depots, for cars that may be stopping at the stations—which improvements have mostly been made, including about two miles of track from Pittsfield to the junction with the North Adams railroad.

Purchases of land have been made, during the season, at Worcester, East Brookfield, Palmer, Springfield, and Chatham, amounting to about $40,000; but the quantity purchased has been limited to the necessary wants of the corporation.

By the provisions of the act of March 25, 1845, a further issue of 1500 shares of the capital stock can be made,

Which will amount to		$150,000 00
Of this amount, there has already been expended for construction and eq'pment of the road	$46,802 88	
And there will be required to pay into the sinking funds	50,000 00	96,802 88
Which will leave for construction and equipment of the road*		$53,197 12

By this exhibit, it will be seen that further provision to supply the means to be expended for construction the coming season, which deficiency, and the requirements of the road hereafter, can only be provided for by an increase of the capital stock.

The Pittsfield and North Adams railroad was considered as opened for public use on the 1st day of December, 1846, at which time the Western railroad company commenced operating it, under a lease of thirty years, the particulars of which have been previously reported.

SINKING FUNDS.

The Massachusetts fund was, as per last report, on the 1st of Jan. 1846.		$290,610 61
Interest on dividends since received		17,426 51
Profit on sales of Providence railroad stock		1,234 25
Dividends and interest accrued and not due		3,775 50
Eleven-twelfths of $40,000, accrued to Nov. 30, and not due till Jan. 1, '47		36,666 67
Total amount of Massachusetts fund.		$349,713 54
The Albany city fund was, as per last report on 1st Jan. '46	169,878 00	
Interest accured in 11 m's. to Nov. 30, 1846	10,900 50	
Eleven-twelfths of $10,000, accrued to Nov. 30, 1846, but not due till January 1, 1847	9,166 67	189,945 17
Total value of both funds Nov. 30, '46		$539,658 71
From which deduct an amount which if put at compound interest Nov. 30, 1846, will produce $319,964 44 when the sterling bonds average due, say July 5, 1869, being for exchange on maturity of scrip		85,720 00
Net value of the two f'ds Nov. 30, '46		$453,938 71
The value of the Massachusetts sinking fund will be, at the time the scrip averages due, provided nothing further should be added to it, reckoning compound interest at the rate of six per cent. per annum, say from Nov. 30, 1846, to July 5, 1869, 22 years, 7 months, 5 days		985,398 84
The value of the Albany sinking fund will be when the principal falls due, provided $10,000 be added annually to the principal, with interest at the rate of six per cent. per annum, say from Nov. 30, 1846, to March 13th, 1871, 24 years, 3 months, 13 days		1,299,156 83
Total value of both funds when the principal falls due, provided nothing further be paid into the Massachusetts fund		2,284,555 67
The value of the Massachusetts fund will be, provided the law requiring 40,000 per annum to be added to it, reckoning compound interest at six per cent. per annum, when the principal falls due		2,783,286 22
Add value of Albany fund, as stated above		1,299,156 83
Total value of both funds when average due		4,092,443 05

* Six engines and four passenger cars are now building, which will cost $57,500.

From the preceding statements it will appear that the affairs of the corporation are in a flourishing condition; and it affords the Directors much satisfaction to say, that the prospects of the road for the future are very encouraging. All of which is respectfully submitted.

Addison Gilmore, Edmund Dwight, John Howard, Robert Campbell, Stephen Fairbanks, Josiah Stickney, Jonathan Chapman, Abraham H. Howland, James Russell,

Boston, Jan. 11, 1847. *Directors.*

Foreign Iron Trade.---Items.

We clip from our exchanges, and other journals, received from Europe by the last arrival, the following items, in reference to the Iron business abroad:

Iron Trade and Railways of Belgium.—A letter from Brussels, states that the iron trade of Belgium is receiving, from the extension of railways in that kingdom, a perceptible and unprecedented impulse. At the monthly meeting of the Ironmasters, held on the 8th inst., it was decided not to raise the price of pig iron; but all large orders at the present rate of £5 8d. per ton, taken at the works, are refused, and in some instances, an advance has been freely given, there being no stock to fall back upon. For rails, £12 16s. per ton, the other descriptions bar iron prices remain the same, and the rolling mills are fully occupied; altogether, the prospects of the trade are highly satisfactory.

In the Moniteur Official, which publishes a monthly list of the value of the shares in the various companies, there are some striking instances of the rapidly increasing value of all property connected with the iron trade of this country. Among others, the iron works of Sclessin, near Liege, the shares of which, on the 1st of January, were at 995f., are quoted on the 1st day of November last at 1200f., or 20 per ct. premium. The shares of l'Esperance were at 845 in January, they are quoted on the 1st of November, at 1425; but the most striking instance is the shares of Monceau iron works, situated at the northern terminus of the Sambre and Meuse railway. In January, the 1000f. shares were at 2000, and on the 1st of November 2300, with buyers. The 1000f. shares of the Providence Works, which are of more recent date, are quoted at 1500f. This company has just finished erecting a very large rolling mill on the borders of France, to avoid the present high duties on rolled iron.

The English Iron market has been rather animated during the week, owing to the Gt. Northern railway company having closed for about 45,000 tons of rails, out of 75,000 tons, for which they advertised. The contracts were taken by two eminent Welsh houses at a price equal to £9 12s. to £9 15s. at the works in Wales. It is reported the directors of the company were willing to have closed for the remaining 30,000 tons at the above rates. In Staffordshire and Welsh pig iron a very good business has been done during the week, at full prices; and owing to the large orders now in the market for railway chairs there is no doubt an extensive demand will take place ere long both for Welsh and Staffordshire pigs. Scotch pig iron has been in good demand, and several sales made during the week, at prices varying from 72 to 74s, according to numbers. Swedish iron and steel are firm at quotations. English copper and tin remain unaltered. Banca and Straits are in fair request at quotations. English lead firm. Spelter for spring delivery has been sold at £19, and on the spot £19 12 6 has been paid. As the navigation is now closed, and our stock reduced to about 2000 tons, there is no doubt higher prices will be realized.—*Corresp. London Mining Journal.*

Roman Mining and Iron Foundry Society.—At the present time, when the projected railways in the States of the Church are exciting general attention, as proofs of our internal resources for their formation, may be numbered the two establishments for the manufacture of iron, which, within a very short period, have risen to be unrivalled by any in Italy itself, and to compete in excellence with the most celebrated of other countries. We speak of the establishments of Tivoli and Terni; the one in the neighborhood of Rome and with the inexhaustible advantages derived from the waters of the Anio, has already two great machines, besides many other minor ones, for the fabrication of tools for the labors of the field, and instruments of every sort for weaving, of qualities so perfect and so much sought for as to supply not only the entire states of Rome, but also those external. The other establishment, that of Terni, receiving aliment from the river Velino, is a foundry supplied also with the most spacious premises, magazines and habitations for the laborers; machinery the most excellent, the springs and wheels of iron; eight large forges, four great mallets and two great pumps, with a cylinder of enormous dimensions: as yet the only one in Italy adapted for the fabrication of the rails, the latten, etc., for railways. Now these two establishments united together, and working in full activity, might easily fabricate iron, cast, beaten and wrought cylindrically, to the amount of 12,000,000 pounds weight per annum. The proprietors of both foundries, knowing from experience how much their interests were to be served by the increase of capital, have determined on forming an anonymous society, which vesting by means of actions the sum of 600,000 scudi, might make itself responsible for the two establishments, amplify the sphere of operations and carry on the working of the mines this country possesses. Accordingly was held, on the 15th November, the first general assembly of the society, at which about 200 assisted; it was in truth a convention of no bles, proprietors, merchants and artists, most goodly and honorable; the first occasion we believe when it has been shown how readily the Italians are to respond to the appeal of an industrial association, in the same degree as they have been to associate themselves for the purposes of benevolence whenever called to do so. In this assembly were initiated the measures for the direction of the society; a president was elected, the able and scientifically instructed duke, Don Mario Massimo; and two special commissioners were appointed for the revision of the statutes and contracts that have relation to the government, etc., of the body. And thus, within a short time, we shall see it legally constituted, prospering and maintaing its important post, so as to administer to the necessities of the states, and to undertake the vast works of the railroads to which his Holiness Pius IX has graciously acceded his protection; as he has also deigned to recognize as worthy, and bestowed his approbation upon, the objects of this honorable association.—*Roman Advertiser.*

West of Scotland Iron Company.—We lately visited the West of Scotland Company's Malleable Iron Works, at Motherwell, says the Glasgow National Advertiser, which have been only recently brought into operation. We believe that this establishment is not only the most extensive, but perhaps the best constructed malleable iron work in the kingdom. We found only part of the works in operation; but from the state of forwardness of the remaining portion, the whole will probably be at full work in a few months hence; when they will turn out 700 tons of rails weekly. The extent of the works may be conceived, when it is stated that they will manufacture 50,000 tons of pig iron, consume 100,000 tons of coals annually, and employ 1200 to 1500 men.

Elginton Iron Works, Ayreshire.—One of the three new furnaces, recently constructed here, was put into full blast a short time since—George Johnstone, Esq., of Redburn, presiding at its celebration. The others will soon follow. The building of a 4th furnace has already been commenced, and others are said to be contemplated.

Contracts for Rails.—Mr. Levick, of the eminent house of Crutwell, Allies & Co., of South Wales, attended in Dublin last week, and concluded contracts with the Gt. Southern and Western, the Dublin and Belfast Junction, and the Dundalk and Enniskillen companies, for the delivery in all of 15,000 tons of rails.

Iron Trade.—At a meeting of the proprietors of the Clay Cross Collieries, held at Derby a few days since, it was determined to open iron work, in conjunction with that colliery without delay. The circumstance of beds of iron, lime and coal, lying contiguous to each other at clay cross, will, it is supposed, render the undertaking very profitable.

☞ The London Mining Journal of December 15th, contains the following:

"I invite your particular attention to the following statement, the facts of which are borrowed from *Le Siecle*, some of whose writers are intimately connnected with the railway alluded to:

"The Northern Railway company, after having vainly attempted to procure rails in France, demanded of the government permission to import 25,000 tons of rails from abroad. It did not demand to introduce this great quantity of iron free of duty, but contented itself with proposing to pay such a duty as should make the rails 350f. (£14!) a ton, which was what it paid last year. It calculated that it could procure rails in England at from 240 to 250f. a ton; that the

price of conveyance would be from 40 to 50f. a ton; and that a duty of from 50 to 60f. a ton would, under the peculiar circumstances, be accepted, instead of the modest 206f. a ton inscribed in the tariff. Such an arrangement would have yielded 12,500,000f. or 15,000,000f. (500,000 or £600,000 to the national exchequer, and would have done no harm to the ironmasters; for, be it repeated, the company had 'vainly attempted to procure in France' the rails it demanded permission to introduce. Will you suppose, naturally enough, that the Minister of Commerce hesitated not one moment to accord the required permission? How, indeed, you will ask, should he, when he has every day under his nose official returns, showing what the iron masters can produce, and what they have undertaken to supply—returns which prove most clearly that the greatest miracle on earth could not enable them to meet their engagements. But, ah! you don't know this good minister of commerce. Instead of ordering the custom house to be thrown open to the English rails at 50 or 60f. a ton, the worthy man sent to the committee, which the iron masters have elected to preside over them. to ask what they had to say to the demand. The iron masters, of course, with more than their brutal selfishness, unhesitatingly declared that the offer must not be accepted. It will seem incredible to you, that men who cannot do a thing, are determined to prevent others doing it; but, incredible though it be, such is really the truth of these iron monopolists of France. They, however, by way, probably, of gilding over their scandalous refusal, proposed to undertake, by clubbing among themselves, to supply the rails at 380f. the ton! But, it may be asked, could the company get the rails even at that exorbitant price? Most certainly they cannot, unless as the *Siecle* says, they import *fonte*, to fabricate them from Belgium or England; and, even if they import *fonte*, not the slightest reliance could be placed upon their promises or their treaties."

American Orders—The Iron and Birmingham Trade.—A correspondent, writing from Birmingham, on Thursday evening, says—"I am glad to be able to state, that the commercial letters received here on Tuesday, from America by the Britannia, are of the most favorable description, and hold out prospects of such a demand for goods, as cannot fail to secure employment at remunerative prices in this district for some time to come. At all the houses, brisk orders have been received, with an assurance in some of the advices, that a very considerable increase in the demand may be fully expected in this and the month of January. At some establishments the orders for chains and heavy iron work is so great, that it is confidently asserted the manufacturers of these articles have now before them full twelve months' work. The most gratifying fact, however, connected with this demand is, that it is the result of low stocks in the United States, and not of speculation, which would render the returns doubtful. There is, therefore, but one thing which can at all interfere with these pleasing prospects—and that is an attempt to raise the price of the raw material above the standard of the competitive market. It is now confidently asserted, by some persons in this locality well acquainted with the iron trade, that a rise in the prices will take place at next quarter day, and that this step will be fully justified by the increased foreign and home demand for manufactured goods, and the sustained railway consumption. On the other hand, I am authorised by one of the largest makers in South Staffordshire to state, that such an advance will not take place, but that the present prices will certainly be maintained. In proof of the sincerity of this opinion, my informant assured me he was prepared to take an order for 30,000 tons at the present prices; and if the opinions and actual position of the merchants and manufacturers be considered in the question, there would seem to be good reasons for the adoption of this course. A commercial letter now before me, from a large American house, says—'I send you an order for bar iron, at the quotations of the 19th of October, (the first after quarter day;) but if the price advances as high as 10s. per ton above this quotation, please omit the present order.' Added to this, the universal opinion of all the merchants is, that if there is no advance, there will be a greatly increased demand for iron and made goods; but that, if there is an advance, the demand will inevitably be curtailed. Knowing the importance of this question at the present moment to a large body of commercial men, I have collected the best information upon the subject."

Railway Statistics.—The returns of the leading railways for the second half year of 1846, give the following comparisons and results, in round numbers:—London and North Western, 350 miles, with a capital or cost of £13,000,000; gross receipts, above £1,000,000; dividing to shareholders, £543,929; paid $21,425 for local rates and taxes, and £24,582 for the government duty of five per cent. on passengers, besides property tax, income, stamps, etc., being equal to about nine per cent. on what the shareholders divided for rates and duty. Great Western, 222 miles; capital £8,000,000; gross receipts, £496,000; divided to shareholders, £301,807; paid £15,030 local rates, and £14,748 government tax, etc., equal to about ten per cent. on the shareholders' profit. The Midland railway, 178 miles; capital £7,250,000; gross receipts, £324,000; divided to shareholders, £170,000; paid £7130 for rates, and £6645 for government tax, besides, etc., or eight per cent. on dividend. The Manchester and Leeds, 84 miles; capital, £3,750,000; gross receipts, £153,000; 1,000,000 passengers; divided among shareholders, £86,470, after paying £4414 local rates, and £3464 duty, besides, etc., or ten per cent. On a rough estimate of the 12 leading English railways (those we have enumerated among the number) of 1250 miles (or at 10 acres per mile, 12,500 acres) there was paid for only half a year, £75,951 local rates, and £73,177 government tax on passengers, besides income tax, property tax, stamps, etc. Estimate that for a year, and we have £152,000 and £146,000 for these 12 railways, paid in reality by the public, to local and general taxation. Estimating the present railways at double that length of miles, gives 2500 miles, or 25,000 acres, paying about 96 times more than agricultural land, mills, or other property, which pay as many threepences as railways do pounds for the same extent of land to the local taxes, etc.

Cold Spring Iron Works.

On the Western bank of the river Thames, a mile and a quarter, perhaps, below Norwich Landing, beside the New London turnpike, stood, some time ago, a brewery and distillery. The ground is now redeemed for more beneficent uses, furnishing the site of the Cold Spring Iron Works. The business is carried on by a joint stock corporation, of which Mr. John Huntington is president.—The building is of the most simple character, no other being requisite, of plain boards, one story high, like a blacksmith's shop, with sky-lights, but without a floor. The sight of it reminded us of the Millerite tabernacle in Boston; and a glance at the works within by no means served to drive away the thoughts of the end of the world which the exterior had awakened. The establishment was first commenced in September, 1845. The preparations having been completed in April, 1846, the work was begun; but almost immediately afterwards was brought to a very sudden termination by the occurrence of a fire which consumed the building. In the month of June next following, the shop having been rebuilt, the work was resumed. The building is 117 feet by 85.

The business is the rolling of iron into bars by means of machinery, rather a novel one in this part of the country, and well worth a visit from strangers. The stock is scrap and pig iron. The first is collected in the vicinity; the pig is obtained at the greater markets. The whole is American.

From six to ten tons of coals a day are used; a fact which will help to give some just idea of the magnitude of the operations. The coal was formerly brought from Pennsylvania; but at present the Pictou and Sidney coal is employed to feed the fires.

Steam power is the kind used; the engine being of a hundred horse power. The manufactured iron amounts to about 1200 tons a year, representing a value of $100,000 or more. Most of this is furnished to order; the remainder goes to the New York market. The mill is kept running on an average only five days in the week, by which time the furnace commonly needs repairs, and is suffered to cool for the purpose. From the steam produced in heating the iron, is made the power for rolling it. The engine was built by Hinckley & Drury of Boston. It is kept running day and night. We had almost forgotten to mention, that a no inconsiderable part of the business is the manufacturing of hoops for whaling casks.

The company employed about 40 men.—Some of these work by time, and some by the ton. They make good wages, getting, when the works are in operation, about two dollars a day.—*Norwich Courier.*

Correspondents will oblige us by sending in their communications by Tuesday morning at latest.

PRINCIPAL CONTENTS.

AMERICAN RAILROAD JOURNAL.

Published by D. K. MINOR, 105 Chestnut St., Philadelphia.

Saturday, January 30, 1847.

INDEX FOR 1846.

With the present number of the Journal, our readers will receive the *Index* for last years' volume.

Columbus and Erie Railroad.

A friend, dating at Newark, Ohio, writes us as follows: "From the interest you exhibit on the subject of railroads in Ohio, you will doubtless be gratified to learn, that the Board of Directors of the Columbus and Erie railroad have resolved to place the road under contract from Mansfield to Newark as soon as the engineer can prepare and make the proper estimates. If the 'Central Railroad' from Philadelphia to Pittsburg is carried forward, as is anticipated, we confidently expect to be 'put in communication' with Philadelphia, via Pittsburg, by railroad, within five years. A road from Pittsburg, (if that city keeps her interest in view,) towards Columbus will form a junction with the Columbus and lake Erie road at this place unquestionably. Zanesville is already moving in the matter, and will doubtless go forward to Wheeling, unless Pittsburg anticipates her."

In connection with the above, we find the following in the last number of the Ohio State Journal, touching upon the same subject. The editor says:—"The following communication is from a source which entitles it to the highest consideration of our citizens. No man in Ohio commands more fully the confidence and respect of the people of the state, than the writer. We commend his concluding suggestion, to the early and attentive consideration of all concerned:"—

The Columbus and Lake Erie Railroad Company. This charter, passed in March, 1845, authorized the construction of a railroad from Columbus to some point upon the Mansfield railroad. An organization was held in February, 1845; last fall, soon after the Mansfield railroad was finished, a survey was commenced, and so far matured, that at the December meeting of the Directors, the line from Mansfield to Frederic was adopted as a part of the route.

At a Director's meeting at Mansfield on the 19th inst., surveys had been extended so much as to lead to a selection of the route to Columbus, by way of Newark. The subscription and resources of the company were such as warranted the Directors to order the line to be prepared for letting, and in a few weeks, as soon as the necessary estimates can be made, the whole distance, from Mansfield to Newark, will be placed under contract. Encouragement has likewise been given, that the road will be made at the same time from Newark to Granville. The Directors find abundant reason to justify the belief, that the whole road from Granville to Mansfield will be finished at an early period.

Thus a railroad will shortly be in operation from the lake to a point within 26 miles of the state house; and if a subscription of $100,000 can be raised in Franklin county, a locomotive, fed by lake waters, may whistle in the streets of Columbus within two years. But——

Mansfield, January 22, 1847.

Iron Trade in England.

By the arrival of the last steamer from Europe, the most cheering accounts are received in relation to the iron business. A very great improvement has taken place in prices, during the past month, and it will be seen by our quotations to-day, that this advance promises permanency at least for the present. Wilmer & Smith inform us that the new year has commenced with a decided improvement in the value of iron. Pig iron may be considered as 58s. per ton, and merchant bar iron 10s. per ton higher than the prices in the beginning of December last. This improvement seems likely to be of some continuance, and there seems little doubt that, before the end of the present month, prices will be still higher. It has been ascertained that the stock of pig iron on the 1st January, 1847, is about 100,000 tons less than the quantity held on the 1st of January, 1846, and that the make at present is incapable of any considerable extension, as there is a deficiency of colliers and skilled workmen.

The make of bar iron is reduced in a still greater ratio, in consequence of the continued demand for rails, which has induced many of the iron masters to diminish or extinguish their make of bars, and to turn out a greater quantity of rails; the demand for other descriptions of iron is fair, but not excessive, hence the improvement on these descriptions has not kept pace with that on pig iron and merchant bars. Without reference to a foreign demand for iron, we see in the requirements of Great Britain and Ireland, and the East and West India and Canadian dependencies, full employment for the English ironmasters for some time to come, and should no other counteracting causes intervene, we believe that the prices for 1847 will be above the trade average. The following are the present quotations delivered in Liverpool:—Scotch pig, £4 5s. to £4 7l. 6d.; merchant bar, £9 10s. to £9 15s.; best rolled, 10l 15s. to 11l; hoop iron, 11l 10s.; sheet, 12l; I C charcoal tin plates, 32s. per box.

The London Mining Journal of January 2d, in its article upon the iron trade, says "that great activity has prevailed during the past two or three weeks, in the iron trade, in South Staffordshire: many large contracts have been taken, and others as extensive are now under consideration: much is said of the unusual scarcity of ironstone, and very high prices are realized—while coals are a still more difficult article to obtain. Notwithstanding this state of things, a great discrepancy exists as to prices; a large Welsh house has tendered to the South Staffordshire company, to deliver at one of the Grand Junction stations, rails at £10 2s. 6d. per ton; while a Staffordshire house has found it to their interest to violate the rates agreed upon at the previous meeting, and who have supplied rails at £9 18s. 6d., and chairs at £6 18s. 6d. per ton. Some speculation is entertained as to the decision which will be come to at the ensuing quarterly meeting; but it is generally believed that notwithstanding the demand for railway iron, which would justify an advance, the masters will not make any addition to present prices.—Such a proceeding would probably cause strikes among the workmen and miners, unless increased wages were agreed to; and many of the small manufacturers, who have many contracts on hand, and have for months realized but seriously scanty profits, would most probably be ruined. The advance on coals at the pit's mouth is 1s. per ton. Upon the whole, there appears every probability that the price of iron for the next three months will remain firm; and that, notwithstanding the demand is considerably above the supply, every effort will be made to execute present railway orders at existing rates."

Our own private letters, received by this arrival, from an intelligent American, now in England, who has for many years been connected with the railroad interest in this country—and in whose judgment we place reliance—confirm this intelligence. He informs us that he has conversed with a practical man in London, well acquainted with the subject, who assured him but a day or two prior to the steamer's departure, that he would not be willing to contract for the delivery of railroad iron hereafter at £12 5s.

The demand for iron is very brisk, and large orders have been filled at our quotations. In France, a similar activity prevails, and all the indications show that a most flourishing business, at advanced prices, must follow in this business, during the present year. In relation to this subject, we make several extracts from English journals, to-day—to which the reader is referred.

Railrodiana.

A public meeting was held at Mobile, Alabama, on the 12th inst., to consider a proposition for connecting that city with the waters of the Mississippi and Ohio by means of a railroad to some point on the Mississippi, below the mouth of the Ohio. Resolutions were passed, declaring it to be the duty and interest of the citizens of Mobile, to join in the struggle for internal improvements in which the older cities of the Atlantic are striving to draw to their storehouses the products and wealth of the great west; and expressing an opinion that the contemplated railroad is both desirable and practicable.—A committee of fifty was appointed to adopt all necessary means to promote the enterprize.

The principal objection, says the Philadelphia U. S. Gazette, to making New Orleans a terminus for a line of trans-atlantic steamers, has been the bar at the mouth of the Mississippi. But for this it would long ago have had a line of steamers plying between there and England. A fine harbor has been discovered on the Gulf, and from this place, known as Cat Island, it is proposed to run a railroad to New Orleans, a distance of 60 miles, which will enable passengers to reach the city quicker and at a cheaper rate, the distance from the bar being 110 miles.—The railroad is now being constructed, and there is every probability that Cat Island will be made a terminus for the British West India steamships.

The people in the northern section of New York are taking active measures to fill up the subscription to the stock of the Rome and Cape Vincent road.—Thus far, $425,000 have been subscribed. The charter provides subscription for the road to be made by separate sections—the first extending from Cape Vincent, on the river St. Lawrence, to Watertown; the second from Watertown to Salmon river; the third from Salmon river to Rome. As soon as the stock is taken for the first and second sections (750,000) the company may be organized by the choice of a board of directors, authorized to go on with the works.

The Boston Traveller states that the following resolutions were passed at the annual meeting of the Fitchburg Railroad Corporation, at the Tremont Temple, on Monday:

Whereas, The interests of this corporation will be greatly promoted by a connection with the Vermont Central railroad; and whereas, agreeably to an arrangement between the two corporations, the said Vermont Central railroad company have acted in good faith, by commencing the construction of their road at Windsor, so as to insure the said junction, therefore

Resolved, That it is incumbent on the corpora-

tion, both as a company and as individuals, to act in good faith in carrying out said arrangement.

Resolved, further, that the Sullivan railroad, designed to connect the Cheshire with the Vermont Central road, has our confidence, and is worthy of the aid of the community, and particularly of the stockholders of this corporation, and that we will do, as individuals, what we can, by subscription to its stock, to insure an object so necessary to our interest.

The inhabitants of Rock Island have held a meeting, at which it was agreed to apply for a charter to build a railroad from Rock Island to the southern terminus of the Illinois and Michigan canal. The distance is 90 miles, and the face of the country, over which it is proposed to carry the road, is highly favorable.

The Bangor Democrat makes the following remarks on the subject of the Maine railroads: "The railroad fever in the central part of the state and farther west has not abated. The question whether there is to be one or two roads remains undecided. Both routes are the shortest and the best according to the most respectable authority, and both most deserve the favor of the public. The people in this part of the state do not of course care whether the railroad east from Portland runs on the lower or upper route to the right point on the Kennebec for striking across to Penobscot. But it would be a pity to have two parallel roads near each other, as neither could then be profitable, and it may be that if the friends of each do not unite both may be defeated for the present. We therefore hope there will be a union of interests, as the best thing for all concerned. It strikes us at present, that the people of the eastern part of the state will not consult their true interest by being partizans of the 'broad gauge,' as the narrow will answer all our purposes, and is, therefore, the best for us as it will be the least expensive. The broad gauge road may be the best for very heavy transportation, but the narrow will be all that is required between the two rivers, and uniformity is very desirable."

The Boston Courier—naturally "very cool" upon all topics of public interest, alluding to the subject of the railroads "down east," says—"The lower Kennebec country is in a blaze of excitement with regard to the railroad from Augusta to Boston, with a branch to Bath. Mass meetings have been held in most of the towns upon the route, which have been swelled by large delegations from other towns, interested in the project, and a degree of enthusiasm has been manifested, as detailed in the Kennebec journals, which shows that nearly the whole population is enlisted in the enterprize, and that the work must and will be accomplished. The first assessments were apportioned as follows—Bath, $150,000; Augusta, 100,000; Gardiner and Pittston, 100,000; Brunswick and Topsham, 60,000; Hallowell, 50,000; Bowdoinham, 20,000; Richmond, 10,000; Freeport 10,000; and all agreed to go to work and fill up the list. It has since been found that Augusta is good for at least 125,000. The subscriptions in Gardiner considerably exceed their quota of 100,000; Bath has 125,000, and will go up to 150,000, if not 200,000 yet; while Brunswick and the other towns on the line will soon fetch up and exceed theirs.

"Thus far have the subscriptions progressed. A road passing through such a country, and having such a community to back it, can have but little chance of failure. The Augusta Journal states, as from authority, that a Boston engineer has been employed to superintend the construction of the road who will enter upon his duties forthwith; that they are warranted in saying that the *road is now begun*, that proposals for grading the whole line will be advertised in season to break ground as soon as the snow is off."

A company of engineers are now employed in surveying the southern portion of the Hampshire and Franklin railroad, on that portion of the road lying between Hockanum and Willimansett, a distance of seven miles. Individual land boundaries have also been taken on the line between Hockanum and Grout's in Montague.

For the American Railroad Journal.

Newcastle, (Del.,) January 4, 1847.

There was a communication in one of the November numbers of the Journal—which, having been mislaid, has just come under my notice—signed E. H. Derby, on the subject of Mr. Whitney's Oregon railroad; and as I differ somewhat from Mr. Derby's views on that subject, I trust that gentleman will not take it amiss, if, in the kindest spirit in the world, I point out wherein I differ, and my reasons for so doing.

Mr. D. starts by mentioning the vastness of the undertaking, and the interest that has already been awakened to it in the public mind in every part of the country, which is very true, and is a striking instance of the effect of patient and continued perseverance directed to one great object—of which few persons have evinced more than Mr. Whitney, or with, at the outstart, a poorer prospect, perhaps, of success. When, about two years since, in a personal interview with Mr. Whitney at his rooms, where books, maps, charts, etc., bearing on the subject, were freely scattered on all sides, to whose examination, comparison and digestion he was devoting the energies of his mind, I received from himself a development of his great plan—which I considered so feasable, that I intended to accompany him in his explorations of the country to the Missouri river, which he then had in view, and afterwards accomplished, but I was prevented by circumstances. It was, I confess, with some misgivings that I opened the subject to my friends and acquaintances, lest the smile of incredulity, which it often met with, should be my only reward. I mention this to show the change that has taken place in public sentiment on this subject in the brief space of two years—the result of Mr. Whitney's single-handed efforts.

Mr. D. then proceeds with his first objection to Mr. Whitney's plan, viz: the great length of the work—say 3000 miles from one seaboard to the other—and the consequent heavy charges to which merchandize will be subjected in passing over it. This your correspondent puts at $45 per ton, or at the rate of $1 50 per ton per 100 miles, or the lowest rates at which merchandize is transported on the railroads of the country. While I admit this latter position, I consider $45 per ton too high, for several reasons. In the first place, merchandize starting from New York, for instance, would pass by the present improvements to Lake Erie, and then availing itself of the navigation of the lakes, reach the commencement of the Oregon railroad, considerably less than at the rate of $1 50 per ton per 100 miles. The English trade would probably pass up the St. Lawrence to Lake Ontario, and thence availing itself of the increased facilities lately afforded by the enlargement of the Welland canal, up the lakes to "Whitney"—for such I would suggest as the name of the starting point of the Oregon railroad—also at a less cost than the rate before spoken of. In short, instead of merchandize being subjected to railroad charges for the distance of 3000 miles, 22 or 2300 would be the extent, (unless in winter) and the "flowing sheet, and glancing keel," to which your correspondent poetically alludes, would do much of the rest.

I think I have already shown that the charges may be reduced from $3 to $5 per ton on this portion of the route. Now let us see if it will not fairly admit of further reduction on other portions. This is a work that, singularly enough, will cost no man a dollar; no man will be able to say that it has taken one cent from his pocket. Nature has kindly furnished the capital—she will be the great shareholder; and she will require no dividend beyond the increased welfare and enjoyment of the creatures she has placed here to be the recipients of her bounties. The vast outspread and unoccupied prairies, and the tangled and untrodden forests, are the capital. This is an answer to Mr. D.'s third objection—the great absorption of the wealth of the country. The wealth that is to build the railroad lies hidden in the soil, and the plough of the emigrants which the railroad shall invite to these regions, shall turn it up, and render it available.

As to Uncle Sam—there never was an uncle before that had so much money to throw away in a quarrel, and so little for any purpose that squints toward usefulness. If dame Nature has ever signed, sealed and delivered any title papers by which he claims these regions, he will doubtless rejoice at such a disposition of them; as at the present he appears much inclined, by such devices as land graduation, preemption, etc., to shake himself clear of as much of his landed estate as possible.

By these remarks I mean, that whereas a profitable investment of capital with reference to cash dividends is always the first point considered in ordinary enterprizes. This would look to no such result. It is a great national affair, whose dividends will be rich in public good—in business relations and good-fellowship with the most unfrequented parts of the world, and in an iron bond of brotherhood reaching from Maine to Oregon. We might as well require of the navy to pay six per cent. interest, or the "small fort" below your city to declare semi-annual dividends, as to make that a condition on which should depend the construction of the Oregon railroad.

If, then, we leave this condition out of sight, and I appeal to Mr. D. whether we may not—if indeed his calculations contemplated such a result—a tax upon the business of the road barely sufficient to work it, and keep it in repair, is all that is required. And as the ordinary expense of maintaining and working railroads, may, it is believed, be assumed at 50 per cent. of the gross income—the other moiety being consumed in the shape of returns upon the capital employed—it follows that the Oregon railroad could transport both goods and passengers at one-half the cost of other railroads. But as the passenger business would bear to be taxed at the ordinary rate of, say, three cents per mile (if necessary) the charges for freight could be still further reduced, if desirable.

If we call the cost of the road, agreeable to your correspondent's estimate, and I think he is not far from the mark for a road of first rate capacity, $30,000 per mile—this, at 2,400 miles, the distance by Mr. Whitney's calculations, gives $72,000,000. This is to be understood as including equipments—all complete. If, then, the cost of working and repairs amount to $4,320,000 per annum—or 50 per cent. of a sum that would pay six per cent. interest, a very ample allowance—let us see what amount of business is necessary, and at what rates, to obtain this sum. Well, 50,000 passengers, at, we will say,

two cents per mile, or say $50 each, gives $2,500,000; and 75,833 tons of freight, at, we will say, to be safe, $1 per ton, per 100 miles, or $24 per ton, equals $1,820,000; and altogether the above sum of $4,320,000—an extravagant sum, as it would appear, for the purpose. This is a number of passengers, and an amount of tonnage, equalled by perhaps half of the railroads of the country, and evidently far below the mark. I give these statements to show what a comparatively small amount of business the road could live on.

But I think your correspondent's estimates might be still further reduced, viz: the cost of shipment from China—the trade with China not being alone of importance, however, but also that, as Mr. Whitney tells us, "of Mexico, South America, (western coast,) with all the islands in the Pacific, with China, with Japan, with Manilla, with Australia, with Java, and with all India"—to the mouth of the Columbia. Mr. D. call it $15 per ton, still rather high, I think. The distance between these points is about 6,000 miles, and to China, by Cape Horn, nearly 18,000. Now if $30 a ton is the price of freight from New York to China by sea, we cannot fairly put the freight to Oregon from China, over a calm, smooth ocean, like the Pacific—of which a scientific gentleman attached to one of our national vessels says, that he never saw upon its surface a wave of more than 20 feet in height—especially if we include the difference in the rate of insurance—at more than one-third of the former. However, we will use Mr. D.'s figures for this item.

We have, then, $15 to Oregon, $24 to the lakes, and for the remainder, lake and canal carriage—about 600 miles—I shall say $6, and altogether $35; or but $5 more than by sea, besides a saving in insurance, and interest on capital employed; but I shall make a more distinct reference to these items hereafter.

I have heretofore spoken of the trade between this country and the the East—or rather "West," as these countries will get to be when the Oregon railroad is completed—but I shall now speak of the trade of England and Europe in connection with this channel. And with reference to this trade I will admit all that Mr. D. assumes as to charges, with the exception of that from the lakes to the Atlantic; on which account I deduct $3 per ton. Of course it is not to be expected that we shall build railroads for the accommodation of strangers, without a *quid pro quo*—therefore the allowance of $1 50 per ton per 100 miles, from Oregon to the lakes, is correct, I think, as applied to this trade. We have then $57 from China to the Atlantic coast and $6 thence to Liverpool, by sailing vessels, gives $63 per ton, in this comparative scale of charges.

The time occupied in sending out goods, or specie, to China, and getting a return, is not less than 12 months. Now if every ton of goods that is sent to or returned from China, is worth $500, that is to say, if every pound is worth 25 cents, and I think on examination this will be found low enough, as take the principal articles shipped from this country, specie, domestic cottons, (the principal) gensang, furs, manufactured tobacco, spermaceti candles, etc., ($175,000 worth of lead being the principal exception;) and those returned, silks, teas, linens, spices, drugs, china and porcelain wares, die stuffs, etc.; then the interest on the capital invested in a ton of merchandize will amount, while making the voyage, to $30, and the insurance at two per cent.—I have some idea that this is about the rate, though I may be wrong—amounts, out and back, to $10, to which add $30, the interest on capital, and $30 for freight, and we have $70 as the charges on a ton of merchandize by the "glancing keel." The rate of interest in England is not so high as I have placed it; but what merchant expects, even there, to make less?

Add to $63 the freight charges by the Oregon route, four months' interest, or $10, and one-half the former amount of insurance, or $5, and we have $78 as the charges by the Oregon route per ton; or but an excess of $8. It will not be difficult to see sufficient advantages to result from the latter route to more than counterbalance this, which is equal to but 1¼ per cent. upon the capital; and the charge of $78 per ton, but 6 per cent. Compare this with the percentage of freights at present on the heavy articles which compose so much of the commerce between this country, England and Europe, viz: flour $1 50 per barrel, or 30 per cent.; 35 to 40 cents per bushel for grain, or 33 per cent. on wheat, and 50 per cent. on corn. One advantage alone that would far more than counterbalance the above extra charge of $8 per ton, would be the certainty with which goods might be looked for at a given time; thus removing the great uncertainty attending that trade, from the fluctuations in the market between the conception of an enterprize, and its completion. A merchant can tell to-day what an article is worth, and can form some conception of what it will be worth three or four months hence; but as the distance in time recedes, the uncertainty increases in a geometrical ratio. It is this that secures to the ocean steamers their freights—together, of course, with the high price of the goods so sent, and the consequent small per cent. upon the cost, after all, of the high charges to which they are subjected.

On looking at the reports on the subject of the commerce and navigation of the country, it will be seen that those articles which compose the bulk of trade between us and the East, are, mainly, those high priced articles which Mr. Derby admits will bear a high rate of transport, some of which I have named above; and it will further appear, a fact that has just met my eye, that I am borne out in assuming the value of each ton of merchandize which passes between the two countries at $500. In the year 1843, the total of imports from China amounted to $4,934,000, and it was transported by about 12,000 tons of shipping; which is equal to $411 per ton value. If we allow for the large amount of stores, etc., carried on these long voyages, it will be seen that I am nearly right. The commerce of China, Asia generally, and the Sandwich Islands, amounts to about 16,000 tons per annum, or 32,000 both ways. This will show what the Oregon railroad can do towards the commerce of Europe, after accommodating our own.

Having already alluded to M. D.'s third objection, I shall offer one or two remarks on his second, and close this article; which has already spun out beyond the limits I had assigned it. This objection is the immense tract of wilderness through which it would pass, affording no remunerating local traffic for many years. This is not a new state of facts as applied to railroads—except the distance—where even a profitable investment is looked to; as take the Vicksburg and Jackson railroad, spoken of by the writer in the Edinburg Review, as transferred to your columns. This work is about to be extended 200 miles. The immense wilderness spoken of, presents in fact the very strongest argument in its favor. It is the facilities which the railroads alone can afford, that will enable our hardy pioneers to enter upon and subdue it with despatch—and whether or not a remunerating local trafic should soon spring up, would be of little importance, so that it finally peopled their remote regions; if the through traffic should be sufficient for its maintenance, as it in al probability would.

Still your correspondent's suggestion is doubtless worthy of consideration; and the route he proposes, it cannot be denied, has its advantages. But as we want this railroad for our own purposes—to promote and facilitate intercourse and good feeling among ourselves—to enable us to convert the untrodden wastes to our uses—after all it will appear that Mr. Whitney's plan is the true one.

I trust, Mr. Editor, I have given your correspondent no cause of offence in my *objections* to his *objections*. I certainly have endeavored to avoid so doing, as between us of the profession there should be nothing but harmony. But holding an honest difference of opinion, I have expressed it, I hope courteously. Yours very truly. F. P. Holcomb.

Americans in Russia.

The following extract of a letter from a Philadelphia engineer, now in Russia, and who is a machinist of ability and repute, is going the rounds of the press, from the Philadelphia Enquirer, and we give place to it as containing matters interesting to our readers. It is dated Herald Mecanical Works, Alexanderoffsky, Russia, Nov. 4.

"In the beginning of our operation here, we had very much to do, in organizing this mammoth establishment. We found it greatly in decay and confusion; so much so, that we obandoned all the old tools, and fitted up the establishment anew. We were looked upon by many as wild adventurers, and that we had undertaken to do a vast deal more work than it was possible to do in the time allotted; but at the expiration of our second year, they became convinced, 'that some things could be done as well as others,' and the present it is only requisite for us to say a thing can be done, and all hands knock under. We shall finish this year or the beginning of the next the full complement of trucks, (5300,) and in all of next year, (1847) the 162 locomotives will be finished. We are now driving on with such speed, that we feel no hesitation in duplicating our first orders in 1850. We have limited the number of engines to be out six a month to prevent running out of materials. We have turned out nine a month, and the number for the last six months is 65. In our car shops we are getting on very finely; we have delivered to the government 200 platform cars, and 300 box cars, and are now finishing five box cars every day—they are large, eight wheel cars, 30 feet long. We have not yet commenced on the passenger cars, but have completed the building of a shop for that purpose. The building is 375 feet long by 60 wide, and divided into three apartments, the first for preparing the work, the second for erecting, the third for painting. The number of cars that we have to make is 2000 box, 580 platform, and 70 passenger cars—making the complement for the 5,300 trucks in the first order. Independently of these, we have taken an order for two imperial cars, 70 feet long, to be placed on 16 wheels. We are to receive for these cars, 11,600 rubles of silver each, or $8,625, without chairs, sofas, or inside trimming. We have undertaken, and now have nearly completed, about 20 miles of the railroad. This we undertook more for our accommodation than profit, so as to have a portion of the road to operate upon.—We have declined making the rest of the road, as it would interfere with our present business.

"We do considerable transient work, and could have much more if we chose to take it. We are now making 7 stationary engines for the interior, and have in hand several heavy orders for bolts and nuts for bridges on the line. This has been a very busy year for me, and our imports have been very heavy, amounting to over half a million of dollars. The number of vessels we have received this year is 85, and there are several more yet to arrive. We have had at times this summer, nearly 3000 men employed, which, together with the foreign business has giving the mercantile department much to do, and to prevent errors occurring, I have been constantly on the alert. All the business with the government has to be transacted by writing."

The City of Lowell.

In a recent letter, published in the Boston papers, Mr. Nathan Appleton, of that city, gives the annexed interesting particulars, touching the first undertaking of the now populous and flourishing city of *Lowell, Mass.* He says:

"As connected with the matter, and as constituting the germ of the present city of Lowell, the following circumstances may be thought interesting. Mr. Patrick T. Jackson and myself had been amongst the original associates who established the Boston Manufacturing company of Waltham, in which the power loom was first brought into successful operation on this side of the Atlantic. The success of that establishment had satisfied us that the time had arrived for undertaking the manufacture and printing of calicoes, and in the summer of 1821 we made an excursion into New Hampshire, in search of a suitable water power.

"Soon after our return, the idea was suggested to Mr. Jackson of purchasing the stock of the Pawtucket canal on the Merrimack river, together with such lands as might be necessary for using the great water power which might be created by its enlargement. He communicated the same to me. After ascertaining that Mr. Kirk Boott was willing to join us in the enterprise, and become the manager and agent to carry it into effect, we proceeded, through trustworthy agents, to purchase the canal, and the most important adjoining lands. It was not until these had been secured, that we thought proper to visit the scene. I well recollect the first visit. It was in the month of November, 1821, and a slight snow covered the ground. The party consisted of Mr. P. T. Jackson, Kirk Boott and myself. We perambulated the ground and scanned the capabilities, and it may be worth recording that so sensible were we of its future importance, that I distinctly recollect one remark made by one of the party, that some of us might probably live to see the place contain 20,000 inhabitants. We proceeded with new associates, to organize the Merrimack Manufacturing Company, with a capital of 600,000 dollars, to which corporation the whole property was conveyed. The enlargement of the canal was finished during the two following summers, and on or about the 1st day of September, 1823, the first water wheel performed its evolutions. The city now contains, I am told, upwards of 30,000 inhabitants.

"I certainly look back with satisfaction upon the part which I have had in leading to this result. I do not say this with any reference to pecuniary interest. I could not say it, did I not conscientiously believe that the introduction of the cotton manufacture has added greatly to the mass of human happiness in those immediately concerned in it, as well as to the aggregate wealth and prosperity of the whole country. I could not say it, did I perceive in the system any tendency toward a relaxation of the moral purity which has ever been a characteristic of our beloved New England. My mind was early turned to a consideration of this question. I could never perceive any just ground for the opinion which formerly prevailed extensively, that occupation in manufactories was less favorable to morals than other manual labor. This opinion has, I believe, universally given way before the light of experience. 'Tis the elevation of all labor above the right of a mere subsistence, which gives it character and standing in society, and constitutes the elementary differences between American and European labor. That this elevated position may be strengthened and perpetuated by our institutions, is my ardent wish."

Kennebec and Portland Railroad.

The Boston Daily Advertiser—one of the soundest business papers in the country—publishes the following able article on this railroad, with the annexed preparatory remarks:—"We are glad to learn that the enterprize bids fair to be undertaken with energy, and to be prosecuted to a speedy completion. We agree with the writer in the belief that this road promises to be among the most successful works of this nature, for which the country affords an opportunity. It will enjoy the double advantage of passing through a tract of country of large population, collected in large and flourishing villages, and engaged in commercial and manufacturing pursuits, and also of forming a thoroughfare for the travel of a large population residing beyond its two termini. It will form the line of direct connection between the commercial and political capitals of the state—and it will at the same time connect with both of them, as well as with this city, the large towns of North Yarmouth, Freeport, Brunswick, Bath and Gardiner, and it will form a part of the route from Boston and Portland, towards the whole eastern portion of Maine, both by the sea coast route, by way of Wiscasset and Bath, and by the inland route, by way of Augusta and Hallowell."

We understand that at a meeting of the Directors of the Kennebec and Portland railroad last week, in this city, it was determined to put the whole line to Augusta, with the branch to Bath, under contract as soon as the state of the surveys and the season would admit. The subscription to the stock has been largely increased upon the line of the road, within the last ten days, and with the former subscriptions, it warrants the Directors in proceeding with the work as fast as is practicable to do so. It is believed that the road to Augusta can be completed in less than two years; and the expectation is entertained, that by an arrangement with the Directors of the Atlantic and St. Lawrence road to run upon that to North Yarmouth, the road to Brunswick, if not to Bath, may be opened for travel within one year.

This road, when completed, will form an important link in the great chain of railroads leading to this city. The people of the state of Maine are intimately connected with us in all their business relations, and we have a strong interest in the success of an enterprize that will afford facilities for improving and extending this connection. The proposed road runs through and connects all the large towns in Maine on the west side of the Kennebec river, and is in the direct line to all of the principal towns east of that river. The number of inhabitants in the towns through which the road passes, is as great as on the line of any road of the same length in New England; and in all of the towns the people are engaged in commerce and manufactures, and intimately connected with each other in their social and business relations. This will secure to the road a large local travel, which is found to be the most sure source of profit to railroads. Some opinion can be formed of the travel and transportation that would pass over this road to this city, from the throng of passengers that have crowded the Kennebec boats for the last two or three seasons.

It has been objected to this road that it will have to compete with the boats for a large portion of the year, and thus reduce the amount of its profits. So far as the public is concerned, the only effect this competition will have, will be to insure a low rate of fare, and so far as the stockholders in the road are interested, low fares will yield as much as high fares, where the population is dense and there is an extensive region from which the travel can be drawn. More than three-fourths of the whole population of Maine are within forty miles of the sea coast; and the obvious policy of securing the greatest advantage to a railroad, is to run it through the large towns near the coast, till it strikes the Kennebec river, the centre of the population of the state, and then run up that river to some point where a road would strike off to the east.—This is what this road proposes; and it is confidently believed by the subscribers to the stock in Maine, and by the Directors, that it will be one of the most profitable roads connecting with this city. Some of our large capitalists have subscribed liberally to the stock, and we hope that others, and the business men of the city, who are more immediately interested in this enterprise, will not withhold from it their support.

English Items.

The "Great Britain."—It appears, says the Mining Journal, that the statement which appeared in our Journal of last Saturday, announcing the abandonment by the directors of all intentions of saving this ill-fated steamer, was incorrect. By a report from Mr. Brunel, (the company's engineer) on her present state, just published, we learn, that "except the parts actually damaged, the extent of which is comparatively small, the ship is perfectly sound, and as good as the hour when she struck. The principal injury is in her bottom, under the boilers and engines. The vessel has been evidently thumping on the rocks, and almost entirely upon this part of the bottom, from the first few days after she grounded—and at present, in all probability, her whole weight is resting on this part; yet, notwithstanding this, she is perfectly straight, and has not broken or even sprung an inch in the whole length. The boilers have been forced up about 15 inches, and one of the condensers has been lifted up about 8 inches, breaking the air-pump. At present, this is nearly the extent of damage done—all of which could easily be repaired if the vessel were in dock." Mr. Brunel considers that there is no doubt that to get the vessel off is better policy than to break her

up where she is, and that the main object is to protect her from the sea.

The Salt Trade of France.—We understand, that in consequence of petitions from several large firms, embarked in the Newfoundland fishery, to be allowed to employ, in 1847, the salt of Spain and Portugal, (which the captains could take in on their passage) for the curing of fish, instead of being restricted to that of France—the Minister of Finance has consented, that all vessels now equipping for the Newfoundland fishery, may lay in salt from those countries. This is a great concession on the part of the French Government, itself the chief monopoliser of the salt trade; and it is hoped will lead ultimately to a reduction in the import duties on British and other salt, at present next to prohibited entering France.

"Gun Tow" applied to Blasting.—A gentleman, who has been a manufacturer of gunpowder, in the west of Scotland, for the last 20 years, has been successful in several experiments with gun tow and gun sawdust, for blasting purposes. A perfectly satisfactory trial was made, on Tuesday last, (through the politeness of Mr. M'Callum, at the Lady Mill Quarry, in the presence of Professor Penny, and a number of other scientific gentlemen. One of the experiments was with a bore of 3 ft. 4 in., and 2½ diameter, charged with 11 ozs. tow and cotton, mixed, (4 lbs. gunpowder would be required) and which brought down about 13 or 15 tons in weight—the effect is represented as "splendid."

New Locomotive.—Mr. Galloway, it is stated, is now trying an experiment on the Great Western Railway, at Maidenhead, up an incline of 1 in 19, from the road below to the station above, with a new species of locomotive. The principle is to do away with the driving wheels altogether, and to connect two horizontal wheels, instead of the driving wheels, with the pistons. These wheels run before, and press the opposite sides of a rail between the other rails by means of leverage gear; and, from their bite on that rail, they produce the traction of the train in lieu of the driving wheels. It is said, that an engine of this kind has drawn 30 tons readily up the incline mentioned.

Antimony Mine in Scotland.—It was announced, some time ago, that a rich mine of antimony had been discovered on the estate of the Marquis of Bute, in the parish of Cumnock. It has now been wrought for some time, and is giving employment to about a dozen hands, and is in every way likely to turn out profitable to the noble proprietor. The difficulty of access to it—the mine being situated on the top of an eminence called Harehill—is attended with considerable expense.—*Kilmarnock Journal.*

New Locomotive.—On Monday, one of the largest locomotives ever constructed for the narrow gauge, was taken from the foundry of Messrs. Bury, Curtis and Kennedy, to the railway station in Crown street. It was drawn by 17 horses, and seemed to attract much attention. The engine has six wheels, coupled, the diameter being about 5 ft. We learn that several locomotives are in course of construction at this factory, which will have wheels of 6 ft. diameter, and a larger stroke of piston than usual, by which the speed will be much increased.—*Gore's Liverpool Advertiser.*

The Tin Trade.—Although the price of iron is good, and an advance daily expected, yet the tin trade is in a somewhat depressed state. Where formerly 1200 boxes were made in a week, now scarcely 800 are completed; consequently, the operatives work but two thirds of their time. Various reasons are assigned for the deficiency in general orders; but, as we are not conversant with the right one, we cannot offer an opinion.—*Monmouthshire Merlin.*

Cymbrain Boiler Plate Company.—We hear that this company, whose works we noticed favorably in a recent number, have already received extensive orders for plates; and, amongst others, from Messrs. Fairbairn and Sons, of Will Mall, London, iron shipbuilders of first rate eminence. Mr. W. Fairbairn is, we believe, the gentleman whose experiments, in relation to the tubular bridge over the Menai have excited so much attention lately in the engineering world.—*Monmouthshire Merlin.*

Coal in Nova Scotia.—The General Mining Association are about to open a new coal mine in Cumberland county. This establishment will supply New Brunswick, and the Nova Scotian ports in the bay of Fundy, and will shorten the distance for the coal vessels from the United States. The coal is said to be of excellent quality.

Irish Railways.—The Board of Works has given its sanction to the full amount of the presentation, for £16,000, to the Waterford and Limerick Railway at Cahir sessions, and West Iffa and Offa barony will be enabled to afford employment to every man therein in want of it.

French Railways.—The Minister of Public Works, has just nominated a commission to report on the experiments commenced on the Sceaux Railway, constructed after a system of curves of small radius and worked by articulated carriages. The commission is also to report on the proceedings of the atmospheric railway established from Nanterre to St. Germain.

Maine Railroads.

A writer in the Boston Courier, who seems to be acquainted with the railroad interest in New England, gives the annexed particulars in relation to the roads, in Massachusetts, New Hampshire, and Maine, which will prove interesting at this time.—The railroad "fever" is at a high pitch in the eastern country, and the people in that section, are very busy just now with the subject. The Courier's correspondent says:—

Since Maine has been re-annexed to Massachusetts by the iron bonds of the Eastern and Maine railroads, the citizens of Massachusetts, and of Boston in particular, are interested in the extension of these railroads, in the state of Maine. I would, therefore, ask for so much space in your columns as may be necessary briefly to inform your readers of the several railroads projected in Maine.

The Portland, Saco and Portsmouth railroad, uniting at South Berwick with the Maine, and at Portsmouth with the Eastern railroad, is the only road now extending from Portland, west. A charter, however, was granted at the last session of our Legislature, for a railroad from Great Falls, at the New Hampshire line, through Alfred, Buxton, and Gorham, to Portland, which, if constructed, will make two separate roads from Boston to Portland, although the way business on part of this new route would be considerable, yet it would seem almost a waste of capital to build both roads, when as the public suppose, a little mutual concession on the part of the present Directors of the upper and lower routes, one road, from Berwick, might accommodate all parties. If the contemplated upper route is built, it must materially affect the stock of the Portland, Saco and Portsmouth, and also of the Eastern railroad.—The upper route would avoid the long bridges and the ferry on the lower route. A survey of this upper route has lately been made, at the expense of the Maine railroad corporation; but it is doubtful if the road can be built at present, without the aid of the Maine railroad.

East of Portland, the Atlantic and St. Lawrence railroad, connecting Portland with Montreal, Canada, has been located and let to contractors as far as Danville, a distance of 30 miles. About 15 miles is already graded, and as the work on the remainder is progressing this winter, the road will be ready for the rails early in the summer, and the cars run as far as Danville before next winter.

Additional sections will be put under contract in the spring, and this road will steadily progress until it meets the Canadian part of the work at the line. They have about the same number of miles under contract on the Canadian side, extending eastwardly from Montreal.

This road will form one of those connecting links between the Atlantic and the great west, which Washington's comprehensive glance was, we believe, the first to suggest.

In conversing with a western gentleman, well acquainted with the business of this fruitful section of the Union, which Portland, Boston, New York, Philadelphia and Baltimore are all striving for, he remarked that there was no cause for any jealousy between these respective cities in relation to this trade, for that by the time they had completed their various channels of communication, the products of the "mighty west" would be so increased, that all would find as much business as their respective lines could accommodate.

Rotary Steam Engine.—Mr. A. Buffum, a member of the "National Association of Inventors," of this city, has made a discovery in rotary engines which he thinks will take the lead of all others. Mr. B's plan has the merit of simplicity, and looks as plausible as any plan for a rotary can. He expects to be able to furnish a ten horse power engine for $50, and one that will not occupy more than two square feet of room.—*Eureka.*

New Grist Mill.—We have been shown, says the Eureka, the model of a mill, invented by Asa Barber, of Stephentown, Rensselaer county, N. Y., and now the subject of a pending patent. It acts upon features truly novel. The grinding is effected by first cracking the grain, when it is passed to another chamber, where it is reduced still more It may then, if not sufficiently fine, be returned to the crushing apparatus as often as it shall be required so to do, to produce good flour. The machinery consists of a peculiar fluted cylinder which operates upon a concave bed of furrows or grooves. Mr. B., who is a member of the "National Association of Inventors," promises that we shall fully describe his mill, with engravings, at a subsequent time.

Computing Machine.—We have seen a machine for computing figures by any of the rules of addition, subtraction, multiplication or division. It operates in the most simple manner, and is equally simple in its construction. This is the invention of a Pole, by the name of Slonimski, who received very large presents from the emperor of Russia, for his invention. We can say of our own knowledge that this is an excellent machine, and can do any sum in those rules with great speed and accuracy. Mr. S. has assigned his claim to a patent right in the United States, to Mr. S. J. Neustadt, of this city who is applying for, and will probably obtain the same. The machines may be made and sold for from $3 to $10 each.—*Eureka.*

RICH & CO'S IMPROVED PATENT SALAMANDER SAFES.

Warranted free from dampness, as well as fire and thief proof.

Particular attention is invited to the following certificates, which speak for themselves:

TEST No. 10.

Certificate from Mr. Silas C. Field, of Vicksburgh, Mississippi.

On the morning of the 14th ult., the store owned and occupied by me in this city, was, with its contents, entirely consumed by fire. My stock of goods consisted of oil, rosin, lard, pork, sugar, molasses, liquors, and other articles of a combustible nature, in the midst of which was one of Rich's Improved Patent Salamander Safes, which I purchased last October of Mr. Isaac Bridge, New Orleans, and which contained my books and papers. This safe was red hot, and did not cool sufficiently to be opened until 16 hours after it was taken from the ruins. At the expiration of that time it was unlocked, when its contents proved to be entirely uninjured, and not even discolored. I deem this test sufficient to show that the high reputation enjoyed by Rich's Safes is well merited. S. C. FIELD.

TEST No. 11.—*Certificate.*

By the fire which occurred in this village on the 27th July last, our Law Office, together with many other buildings, was destroyed—we had in our office one of Rich's *Improved* Patent Salamander Safes, which, though heated red hot, preserved, without being the least damaged, many papers valuable to our clients—the envelopes of a few papers being *slightly* scorched. Some twenty-four hours after the fire, the Safe was removed, and so hot was it, that several hours were required for it to cool off. Our office was in the second story of a large brick building, all the wood used in construction of said house being *pitch pine.* While the Safe was red hot, one of the walls tumbled in, and so injured the lock that it was necessary to break the door open. From this test, we feel no hesitancy in recommending "Rich's Patent Salamander Safe" as *entirely fire proof.*

GOREE & KING.

Marion, Ala., Sept. 15th, 1846.

Still other Tests in the Great Fire of July 19, 1845.

The undersigned purchased of A. S. Martin, No. 138½ Water street, one of Rich's Improved Patent Salamander Safes, which was in our store, No. 54 Exchange place. The store was entirely consumed in the great conflagration on the morning of the 19th inst. The safe was taken from the ruins 52 hours after, and on opening it, the books and papers were found entirely uninjured by fire, and only slightly wet—the leather on some of the books was parched by the extreme heat. RICHARDS & CRONKHITE.

Benton, Miss., December 27, 1845.

One of Rich's Improved Salamander Safes, which I purchased on the 2d of June last of A. S. Marvin, 138½ Water street, agent for the manufacturer, was exposed to the most intense heat during the late dreadful conflagration. The store which I occupied, No. 46 Broad street, was entirely consumed; the safe fell from the 2d story, about 15 feet, into the cellar, and remained there 14 hours, and when found, I am told, and from its appearance afterwards, should judge that it had been heated to a red heat. On opening it, the books and papers were found not to have been touched by fire. I deem this ordeal sufficient to confirm fully the reputation that Rich's safe has already obtained for preserving its contents against all hazards. (Signed,)

WM. BLOODGOOD.

New York, 21st July, 1845.

Reference made to upwards of nine hundred and fifty merchants, cashiers, brokers, and officers of courts and counties, who have Rich's Safe's in use.

The above safes are finished in the neatest manner, and can be made to order at short notice, of any size and pattern, and fitted to contain plate, jewelry, etc. Prices from $50 to $500 each. For sale by

A. S. MARVIN, General Agent,
138½ Water st., N. Y.

Also by Isaac Bridge 76 Magazine street, New Orleans.

Also by Lewis M Hatch, 120 Meeting street Charleston, S. C. 15 1f

FRENCH AND BAIRD'S PATENT SPARK ARRESTER.

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendant Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendant Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckly & Drury, Boston, will be promptly executed. FRENCH & BAIRD.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

Philadelphia, Pa., April 6, 1844.

*** The letters in the figures refer to the article given in the *Journal* of June, 1844. ja15

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, *Agent.*

Albany Iron and Nail Works, Troy, N. Y.

The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co., Boston. ja15

MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed beinglarge, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery

of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,
ja15 Paterson, N. J., or 60 Wall street, N. York.

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York will be punctually attended to.

HENRY BURDEN, *Agent.*

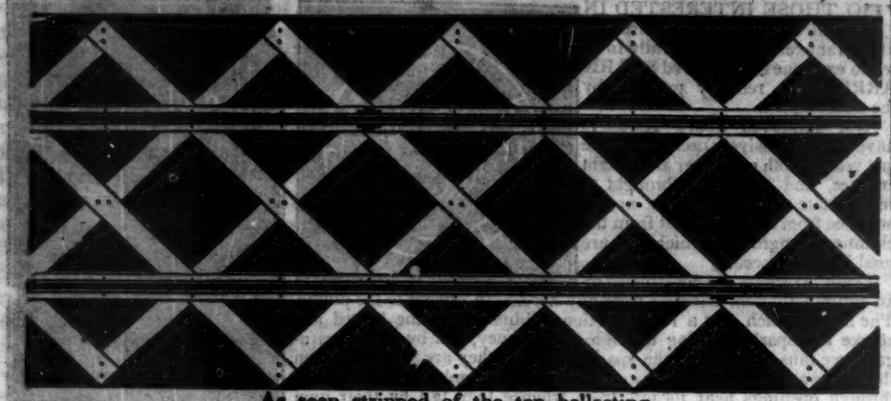
Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal iron merchants in Albany and Troy; J. I. Brower, 223 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

*** Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufcturing so as to keep pace with the daily increasing demand. ja15

DAVENPORT & BRIDGES CONTINUE to Manufacture to Order, at their Works, in Cambridgeport, Mass., Passenger and Freight Cars of every description, and of the most improved pattern. They also furnish Snow Ploughs and Chilled Wheels of any patterr and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices. All orders punctually executed and forwarded to any part of the country.

Our Works are within fifteen minutes ride from State street, Boston—coaches pass every fifteen minutes.

THE HERRON RAILWAY TRACK,



As seen stripped of the top ballasting

A GOLD MEDAL AWARDED THE INVENTOR BY THE AMERICAN INSTITUTE.

THE UNDERSIGNED RESPECTFULLY invites the attention of Engineers, and Railroad Companies, to some highly important improvements he has recently made in the Herron system of Railway structure. These improvements enable him to effect a very large reduction in the quantity of Timber, and cost of construction, without impairing the strength of the Track, or its powers of resisting frost, while they secure additional features of excellence in the Drainage and facility of making Repairs.

The above cut represents the "Herron Track" as it is laid on the Philadelphia and Reading, and on the Baltimore and Susquehanna Railroads. The intersection of the sills of the trellis are 5 feet from centre to centre, while in the new construction they are only 2½ feet. This renders the string piece unnecessary, thus removing the only objectionable feature found in the Track.

The result of experience has proved that all Tracks constructed with longitudinal timbers, such as mud sills, and more especially, the continuous bearing string pieces retain the rain water that falls between the Rails, which, being thus confined, settles along those timbers, and accumulating in quantity flows rapidly along them on the descending grades, washing out the earth from under the timber, and frequently causing large breaches in the embankments of the road. Whereas all water intercepted by the oblique sills of the trellis, is discharged immediately into the side ditches.

In the 5 foot plan, the Track occupies a Road bed nearly 11 feet wide, while the new construction takes but 8 feet; the timber being more concentrated under the Rails. A block of hard wood, about 2 feet long and 15 inches wide, is introduced into a square of the trellis for the purpose of giving an additional, and effectual support to the joints of the Rails, which rest upon it. Should these joint blocks become chafed and worn by the working, and imbedding of the chairs, as is now the case on all Railroads, they can be readily replaced without any derangement of the timbers less liable to wear.

The following is a general estimate of its cost near the seaboard. In the interior it will be considerably less.

ESTIMATE OF THE PROBABLE COST OF ONE MILE.

4,224 Timbers, 11 ft. long, 3 x 6 inches = 68,696 ft. b.m., at $10 =	$686 96
587 Oak joint blocks 2 ft. x 3 x 15 in. = 4,403 ft. b.m., at $13 =	57 24
13,000 Spikes = 2,250 lbs. at 4½ cts	101 25
Workmanship free of patent charge	600 00
Cost of one mile including the laying of the Rail	$1,445 45

He has made other important improvements, which will be shown in properly proportioned models, that give a much better idea of the great strength of the Track than a drawing will do.

Sales of the Patent right to all the distant States will be made on liberal terms.

JAMES HERRON,
Civil Engineer and Patentee.
No. 277 South Tenth St., Philadelphia. 33tf

ENGLISH PATENT WIRE ROPES—FOR THE USE OF MINES, RAILWAYS, ETC.—for sale or imported to order by the subscriber.

These Ropes are manufactured on an entirely different principle from any other, and are now almost exclusively used in the collieries and on the railways in Great Britain, where they are considered to be greatly superior to hempen ones, or iron chains, as regards safety, durability and economy. The plan upon which they are made effectually secures them from corrosion in the interior, as well as the exterior of the rope, and gives a greater compactness and elasticity than is found in any other manufacture.

Many of these ropes have been in constant operation in the different mines in England, and on the Blackwall and other inclined planes, for three and four years, and are still in good condition.

They have been applied to almost every purpose for which hempen ropes have been used—mines, heavy cranes, standing rigging, window cords, lightning conductors, signal halyards, tiller ropes, etc. Reference is made to the annexed statement for the relative strength and size. Testimonials from the most eminent engineers in England can be shown as to their efficiency, and any additional information required respecting the different descriptions and application will be given by

ALFRED L. KEMP,
75 Broad street, New York, sole agent in the United States.

Statement of Trial made at the Woolwich Royal Dock Yard, of the Patent Wire Ropes, as compared with Hempen Ropes and Iron Chains of the same strength.—October, 1841.

WIRE ROPES.				HEMPEN ROPES.			CHAINS.		STRENGTH
Wire gauge number.	Circumference of rope.	Weight per fathom.		Circumference of rope.	Weight per fathom.		Weight per fathom.	Diameter of iron.	Tons.
	INCH.	LBS.	OZ.	INCH.	LBS.	OZ.	LBS.	INCH.	
11	4¼	13	5	10	24	–	50	15-16	20
13	3¼	8	3	8¼	16	–	27	11-16	13¼
14	3¼	6	11	7¼	12	8	17	9-16	10¼
15	2¾	5	2	6¼	9	4	13¼	1-2	7¼
16	2¼	4	3	6	8	8	10¼	7-16	7

N.B. The working load, with a perpendicular lift, may be taken at 6 cwt. for every lb. weight per fathom, so that a rope weighing 5 lbs. per fathom would safely lift 3360 lbs., and so on in proportion. 1y24